

AMENDMENTS TO THE SPECIFICATION

Please replace paragraphs [0015] and [0021] - [0023] with the following amended paragraphs:

[0015] In this embodiment, operating member 18 comprises a generally tubular handgrip portion 106 and an integrally mounted transmission control member drive portion 110, wherein handgrip portion 106 is mounted around operating member mounting portion 70 for rotation coaxially around handlebar axis HA and operating member axis OA. Bearing supports 111 are formed on operating member mounting portion 70 for providing additional bearing support to operating member 18. Retaining tabs ~~112~~ 52 axially retain operating member 18 on operating member mounting portion 70 as shown in Fig. 1. Transmission control member drive portion 110 has the shape of a circular gear with a plurality of circumferentially disposed gear teeth 114. A plurality of (e.g., three) detent unit coupling structures in the form of coupling openings 118 are circumferentially disposed evenly around a side wall 122 of transmission control member drive portion 110 for engaging a corresponding plurality of operating member coupling structures in the form of coupling projections 126 that project from an axially outer side wall 130 of operating member detent unit 38 in the direction of operating member axis OA. Thus, operating member ~~14~~ 18 rotates integrally with operating member detent unit 38.

[0021] Figs. 4(A)-4(C) show the operation of twist-grip shift control device 10 when pulling transmission control wire 26. In the idle position shown in Fig. 4(A), operating member 18 and operating member detent unit 38 are biased downward relative to intermediate member 34 by the return biasing mechanism in the transmission. The face 134A of each detent projection 134 thus rests against the face 83A of a corresponding detent tooth 83, and operating member 18 and operating member detent unit 38 are held stationary relative to base member 14. The rider then rotates operating member ~~14~~ 18 counterclockwise in Fig. 1 against the force of the biasing mechanism in the bicycle transmission. Detent projection 134 initially moves across compensating space 141 to compensate for the cumulative lost motion in control wire 26 and the bicycle transmission as mentioned above, and control wire 26 winds onto the wire winding groove 182 in wire winding

drum 174 of transmission control member 22. Then, the face 134B of each detent projection 134 abuts against the face 83B of a corresponding detent tooth 83. Since intermediate member 34 is nonrotatably coupled to intermediate member mounting portion 66 of base member 14 but is capable of moving axially within locking channels 94, the face 134B of each detent projection 134 slides against the face 83B of its corresponding detent tooth 83 and causes the intermediate member 34 to move axially to the left as shown in Fig. 4(B) against the force of bias spring 36. The shallower inclines of faces 83B and 134B help reduce the resistance to such motion created by bias spring 36 and the return biasing mechanism in the bicycle transmission. After the tip of each detent projection 134 passes the tip of its corresponding detent tooth 83, intermediate member 34 moves to the right, each detent projection 134 enters the space 140 between the next adjacent pair of detent teeth 83, and operating member 18 and operating member detent unit 38 are held stationary relative to base member 14 by the contact between the face 134A of each detent projection and the face 83A of a corresponding detent tooth 83 as shown in Fig. 4(C). In this embodiment, the distance between successive spaces 140 is set such the foregoing operation pulls control wire 26 sufficiently to cause the bicycle transmission to shift by one gear (typically to a lower gear ratio).

[0022] Figs. 5(A)-5(C) show the operation of twist-grip shift control device 10 when releasing transmission control wire 26. In the idle position shown in Fig. 5(A), the face 134A of each detent projection 134 again rests against the face 83A of a corresponding detent tooth 83, and operating member 18 and operating member detent unit 38 are held stationary relative to base member 14. The rider then rotates operating member 14 18 clockwise in Fig. 1. This time, the face 134A of each detent projection 134 slides against the face 83A of its corresponding detent tooth 83 and causes the intermediate member 34 to move axially to the left as shown in Fig. 5(B) against the force of bias spring 36. After the tip of each detent projection 134 passes the tip of its corresponding detent tooth 83, intermediate member 34 moves to the right, each detent projection 134 enters the space 140 between the next adjacent pair of detent teeth 83, and operating member 18 and operating member detent unit 38 are held stationary relative to base member 14 by the contact between the face 134A of each detent projection and the face 83A of a corresponding detent tooth 83. In this case, control wire 26 is released a sufficient amount to cause the bicycle transmission to shift by one gear in the other direction (typically to a higher gear ratio).

[0023] While the above is a description of various embodiments of inventive features, further modifications may be employed without departing from the spirit and scope of the present invention. For example, Fig. 6 is an oblique view of another embodiment of a twist-grip shift control device 10” 10' showing relevant operating components. This embodiment is very similar to the embodiment shown in Figs. 1-3 except for the placement of the intermediate member. Accordingly, the components that are the same as the components in the embodiment shown in Figs. 1-3 are numbered the same, and only the differences will be described here.